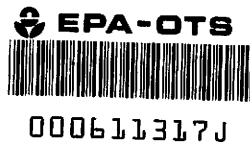


CONTAINS NO CBI



89 JUL 27 AM 10:26
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OFFICE

Form Approved
OMB No. 2010-0019
Approval Expires 12-31-89



90-890000561

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Comprehensive Assessment Information Rule
REPORTING FORM

<p>When completed, send this form to:</p> <p>Document Processing Center Office of Toxic Substances, <u>TS-790</u> U.S. Environmental Protection Agency 401 M Street, SW Washington, DC 20460 Attention: CAIR Reporting Office</p>	<p><u>For Agency Use Only:</u></p> <p>Date of Receipt: _____</p> <p>Document Control Number: _____</p> <p>Docket Number: _____</p>
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SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... [1][2] [2][2] [8][8]
CBI mo. day year

☐ a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. [2][6][4][7][1]-[6][2]-[5]

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule N/A

(ii) Name of mixture as listed in the rule

(iii) Trade name as listed in the rule

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule N/A

CAS No. of chemical substance [][][][][]-[][]-[]

Name of chemical substance

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI Manufacturer 1

☐ Importer 2

Processor ③

X/P manufacturer reporting for customer who is a processor 4

X/P processor reporting for customer who is a processor 5

☐ Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

Yes ☒ Go to question 1.04

☐

No ☐ Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

Yes 1

☐

No ②

b. Check the appropriate box below: *N/A*

☐ You have chosen to notify your customers of their reporting obligations

Provide the trade name(s)

☐ You have chosen to report for your customers

☐ You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

Trade name TDI-80

☐

Is the trade name product a mixture? Circle the appropriate response.

Yes 1

No ②

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

"I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

☐

JAMES H. MORENO
NAME

James H. Moreno
SIGNATURE

7-3-89
DATE SIGNED

PLANT MANAGER
TITLE

(201) 225 - 2440
TELEPHONE NO.

☐ Mark (X) this box if you attach a continuation sheet.

- 1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You CBI ☐ are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

_____ NAME	<u>N/A</u> _____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____)_____ TELEPHONE NO.	_____ DATE OF PREVIOUS SUBMISSION

- 1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI ☐ "My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

_____ NAME	<u>N/A</u> _____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____)_____ TELEPHONE NO.	

☐ Mark (X) this box if you attach a continuation sheet.

1.09 Facility Identification

[illegible]

[E][D][I][S][O][N] [] [] [] [] [] [] [] [] [] [] [] [] [] [] [] []
City

N J 0 8 8 3 7--[] [] [] []
State Zip

Dun & Bradstreet Number[]-[]-[]

[illegible]

Employer ID Number[2][2][1][9][9][4][3][7][7]

Primary Standard Industrial Classification (SIC) Code[3][0][8][6]

Other SIC Code[][][][]

Other SIC Code [] [] [] []

1.10 Company Headquarters Identification

[illegible]

[E][D][I][S][O][N] [] [] [] [] [] [] [] [] [] [] [] [] [] [] [] []
City

N | J 0 | 8 | 8 | 3 | 7 -- () () () ()
State Zip

Dun & Bradstreet Number[][]-[][][]-[][][][]

Employer ID Number 211994377

☐ Mark (X) this box if you attach a continuation sheet.

1.11 Parent Company Identification

CBI Name [L][E][G][G][E][T] [][A][N][D] [][P][L][A][T][T] [][][][][][][][][][][]

[] Address [1][2][3][4][5][6][7][8][9][10][11][12][13][14][15][16][17][18][19][20]
Street

[C][A][R][T][H][A][G][E] [] [] [] [] [] [] [] [] [] [] [] [] [] [] []
City

140 64836--
State Zip

Dun & Bradstreet Number[0][0]-[7][7][4]-[0][0][6][4]

1.12 Technical Contact

CBI Name JAMES H MORENO

[illegible]

Address 5211 SOUNFIELD AVE Street

[illegible]

N J 0 8 8 3 7 --
State Zip

Telephone Number[2] [0] [1] - [2] [2] [5] - [2] [4] [4] [0]

1.13 This reporting year is from 01 88 to 12 88
Mo. Year Mo. Year

☐ Mark (X) this box if you attach a continuation sheet.

1.16 For each classification listed below, state the quantity of the listed substance that was manufactured, imported, or processed at your facility during the reporting year.

CBI

☐

Classification

Quantity (kg/yr)

Manufactured N/A

Imported N/A

Processed (include quantity repackaged) 189,229

Of that quantity manufactured or imported, report that quantity:

In storage at the beginning of the reporting year 0.0

For on-site use or processing 0.0

For direct commercial distribution (including export) 0.0

In storage at the end of the reporting year 0.0

Of that quantity processed, report that quantity:

In storage at the beginning of the reporting year 12,138

Processed as a reactant (chemical producer) _____

Processed as a formulation component (mixture producer) 189,229

Processed as an article component (article producer) 0.0

Repackaged (including export) 0.0

In storage at the end of the reporting year 9277

☐ Mark (X) this box if you attach a continuation sheet.

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

[]

N/A

N/A		Average % Composition by Weight (specify precision, e.g., 45% ± 0.5%)
Component Name	Supplier Name	
		Total 100%

10

2.04 State the quantity of the listed substance that your facility manufactured, imported, or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

☐ Year ending [1][2] [8][7]
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed 182595 kg

Year ending [1][2] [8][6]
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed 160068 kg

Year ending [1][2] [8][5]
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed 135,248 kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

☐ N/A
Continuous process 1
Semicontinuous process 2
Batch process 3

☐ Mark (X) this box if you attach a continuation sheet.

2.06 Specify the manner in which you processed the listed substance. Circle all
CBI appropriate process types.

- ☐ Continuous process 1
Semicontinuous process 2
Batch process ③

2.07 State your facility's name-plate capacity for manufacturing or processing the listed
CBI substance. (If you are a batch manufacturer or batch processor, do not answer this
question.)

- ☐ N/A
Manufacturing capacity kg/yr
Processing capacity kg/yr

2.08 If you intend to increase or decrease the quantity of the listed substance
CBI manufactured, imported, or processed at any time after your current corporate fiscal
year, estimate the increase or decrease based upon the reporting year's production
volume.

- | | | | |
|------------------------------|--------------------------------|----------------------------|-----------------------------|
| <input type="checkbox"/> N/A | Manufacturing
Quantity (kg) | Importing
Quantity (kg) | Processing
Quantity (kg) |
| Amount of increase | _____ | _____ | _____ |
| Amount of decrease | _____ | _____ | _____ |

☐ Mark (X) this box if you attach a continuation sheet.

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

☐

Days/Year Average
Hours/Day

Process Type #1 (The process type involving the largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>250.</u>	<u>16</u>

Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>N/A</u>	<u>N/A</u>

Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>N/A</u>	<u>N/A</u>

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

☐

N/A RESPONSE NOT REQUIRED FOR TDI

Maximum daily inventory kg

Average monthly inventory kg

☐ Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

☐

N/A

<u>CAS No.</u>	<u>Chemical Name</u>	<u>Byproduct, Coproduct or Impurity¹</u>	<u>Concentration (%) (specify ± % precision)</u>	<u>Source of By-products, Coproducts, or Impurities</u>

¹Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
C = Coproduct
I = Impurity

☐ Mark (X) this box if you attach a continuation sheet.

- 2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types ¹	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users ²
<u>K</u>	<u>100%</u>	<u>100%</u>	<u>I</u>

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
<u>K</u> = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

- 2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types ¹	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users ²
N/A	N/A	N/A	N/A

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.14 Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

☐

a.	b.	c.	d.
Product Type ¹	Final Product's Physical Form ²	Average % Composition of Listed Substance in Final Product	Type of End-Users ³
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the final product's physical form:

A = Gas	F2 = Crystalline solid
B = Liquid	F3 = Granules
C = Aqueous solution	F4 = Other solid
D = Paste	G = Gel
E = Slurry	H = Other (specify) _____
F1 = Powder	

³Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.15 Circle all applicable modes of transportation used to deliver bulk shipments of the
CBI listed substance to off-site customers.

☐ Truck *N/A* 1
Railcar 2
Barge, Vessel 3
Pipeline 4
Plane 5
Other (specify) _____ 6

2.16 Customer Use -- Estimate the quantity of the listed substance used by your customers
CBI or prepared by your customers during the reporting year for use under each category
of end use listed (i-iv).

☐ Category of End Use *N/A*

i. Industrial Products

Chemical or mixture kg/yr
Article kg/yr

ii. Commercial Products

Chemical or mixture kg/yr
Article kg/yr

iii. Consumer Products

Chemical or mixture kg/yr
Article kg/yr

iv. Other

Distribution (excluding export) kg/yr
Export kg/yr
Quantity of substance consumed as reactant kg/yr
Unknown customer uses kg/yr

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

- 3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.

☐

<u>Source of Supply</u>	<u>Quantity (kg)</u>	<u>Average Price (\$/kg)</u>
The listed substance was manufactured on-site.	<u>N/A</u>	<u>N/A</u>
The listed substance was transferred from a different company site.	<u>N/A</u>	<u>N/A</u>
The listed substance was purchased directly from a manufacturer or importer.	<u>186,368</u>	<u>\$2.00</u>
The listed substance was purchased from a distributor or repackager.	<u>N/A</u>	<u>N/A</u>
The listed substance was purchased from a mixture producer.	<u>N/A</u>	<u>N/A</u>

- 3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.

☐

- Truck ①
- Railcar 2
- Barge, Vessel 3
- Pipeline 4
- Plane 5
- Other (specify) _____ 6

☐ Mark (X) this box if you attach a continuation sheet.

3.03 a. Circle all applicable containers used to transport the listed substance to your facility.
CBI

☐

Bags 1
Boxes 2
Free standing tank cylinders 3
Tank rail cars 4
Hopper cars 5
Tank trucks ⑥
Hopper trucks 7
Drums 8
Pipeline 9
Other (specify) _____ 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Tank cylinders N/A mmHg
Tank rail cars N/A mmHg
Tank trucks N/A mmHg

☐ Mark (X) this box if you attach a continuation sheet.

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

CBI

☐

<i>N/A</i>			
	Average % Composition by Weight (specify \pm % precision)	Amount Processed (kg/yr)	
<u>Trade Name</u>	<u>Supplier or Manufacturer</u>		
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

☐ Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

☐

	Quantity Used (kg/yr)	% Composition by Weight of Listed Sub- stance in Raw Material (specify ± % precision)
Class I chemical	<u>189229</u>	<u>100%</u>
	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
Class II chemical	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
Polymer	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
	<u> </u>	<u> </u>

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

- 4.01 Specify the percent purity for the three major¹ technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

☐ CBI

	<u>Manufacture</u>	<u>Import</u>	<u>Process</u>
Technical grade #1	<u>—</u> % purity	<u>—</u> % purity	<u>100</u> % purity
Technical grade #2	<u> </u> % purity	<u> </u> % purity	<u> </u> % purity
Technical grade #3	<u> </u> % purity	<u> </u> % purity	<u> </u> % purity

¹Major = Greatest quantity of listed substance manufactured, imported or processed.

- 4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

Yes ①

No 2

Indicate whether the MSDS was developed by your company or by a different source.

Your company ①

Another source ②

☒ Mark (X) this box if you attach a continuation sheet.

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes 1

No ②

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

☐

Activity	Physical State				
	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture	1	2	3	4	5
Import	1	2	3	4	5
Process	1	2	③	4	5
Store	1	2	③	4	5
Dispose	1	2	3	4	5
Transport	1	2	3	4	5

☐ Mark (X) this box if you attach a continuation sheet.

4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥ 10 microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

☐

Physical State		<u>Manufacture</u>	<u>Import</u>	<u>Process</u>	<u>Store</u>	<u>Dispose</u>	<u>Transport</u>
Dust	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Powder	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Fiber	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Aerosol	<1 micron						
	1 to <5 microns						
	5 to <10 microns						

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

a. Photolysis: UK

Absorption spectrum coefficient (peak) (1/M cm) at _____ nm

Reaction quantum yield, ϕ at _____ nm

Direct photolysis rate constant, k_p , at ... 1/hr _____ latitude

b. Oxidation constants at 25°C: UK

For 1O_2 (singlet oxygen), k_{ox} 1/M hr

For RO_2 (peroxy radical), k_{ox} 1/M hr

c. Five-day biochemical oxygen demand, BOD_5 ... mg/l

d. Biotransformation rate constant: UK

For bacterial transformation in water, k_b ... 1/hr

Specify culture

e. Hydrolysis rate constants: UK

For base-promoted process, k_B 1/M hr

For acid-promoted process, k_A 1/M hr

For neutral process, k_N 1/hr

f. Chemical reduction rate (specify conditions) UK

g. Other (such as spontaneous degradation) ... UK

☐ Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

<u>Media</u>	<u>Half-life (specify units)</u>
Groundwater <i>UK</i>	_____
Atmosphere <i>UK</i>	_____
Surface water <i>UK</i>	_____
Soil <i>UK</i>	_____

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours. *UK*

<u>CAS No.</u>	<u>Name</u>	<u>Half-life (specify units)</u>	<u>Media</u>
_____	_____	_____	in _____
_____	_____	_____	in _____
_____	_____	_____	in _____
_____	_____	_____	in _____

5.03 Specify the octanol-water partition coefficient, K_{ow} ... *UK* at 25°C
Method of calculation or determination _____

5.04 Specify the soil-water partition coefficient, K_d *UK* at 25°C
Soil type _____

5.05 Specify the organic carbon-water partition coefficient, K_{oc} *UK* at 25°C

5.06 Specify the Henry's Law Constant, H *UK* atm-m³/mole

☐ Mark (X) this box if you attach a continuation sheet.

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for which it was determined, and the type of test used in deriving the BCF.

<u>Bioconcentration Factor</u>	<u>Species</u>	<u>Test</u> ¹
UK		

¹Use the following codes to designate the type of test:

F = Flowthrough
S = Static

☐ Mark (X) this box if you attach a continuation sheet.

6.04 For each market listed below, state the quantity sold and the total sales value of
CBI the listed substance sold or transferred in bulk during the reporting year.

☐ RESPONSE NOT REQUIRED
FOR T.D.I.
Market

	Quantity Sold or Transferred (kg/yr)	Total Sales Value (\$/yr)
Retail sales	_____	_____
Distribution -- Wholesalers	_____	_____
Distribution -- Retailers	_____	_____
Intra-company transfer	_____	_____
Repackagers	_____	_____
Mixture producers	_____	_____
Article producers	_____	_____
Other chemical manufacturers or processors	_____	_____
Exporters	_____	_____
Other (specify)	_____	_____
_____	_____	_____

6.05 Substitutes -- List all known commercially feasible substitutes that you know exist
CBI for the listed substance and state the cost of each substitute. A commercially
feasible substitute is one which is economically and technologically feasible to use
in your current operation, and which results in a final product with comparable
performance in its end uses.

☐

Substitute	Cost (\$/kg)
UK	_____
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

General Instructions:

For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

☐ Process type

☒ Mark (X) this box if you attach a continuation sheet.

7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

☐ Process type

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.2</u>	<u>TDI TANK</u>	<u>AMBIENT</u>	<u><760</u>	<u>STEEL</u>
<u>7.7</u>	<u>BINDER TANK</u>	<u>AMBIENT</u>	<u><760</u>	<u>STEEL</u>
<u>7.8</u>	<u>BLENDER</u>	<u>AMBIENT</u>	<u><760</u>	<u>STEEL</u>
<u>7.14</u>	<u>COMPRESSION MOLD</u>	<u>AMBIENT</u>	<u><760</u>	<u>STEEL</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type _____

Process Stream ID Code	Process Stream Description	Physical State ¹	Stream Flow (kg/yr)
<u>7.3</u>	<u>TDI TANK VENT</u>	<u>GU</u>	<u>UK</u>
<u>7.6</u>	<u>PREPOLYMER TANK VENT</u>	<u>GU</u>	<u>UK</u>
<u>7.8</u>	<u>PREPOLYMER & FOAM BLENDER</u>	<u>GU</u>	<u>UK</u>
<u>7.16</u>	<u>STEAM VENT (MAY CONTAIN TDI)</u>	<u>GU</u>	<u>UK</u>
<u>7.20</u>	<u>TDI FILTER</u>	<u>OL</u>	<u>186,368</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

¹Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure)
 SO = Solid
 SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☐ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type _____

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7D</u>	<u>POLYOL</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>
<u>7E</u>	<u>TDI</u>	<u>99.9%</u>	<u>HYDROLYZABLE CHLORIDE</u>	
<u>7I</u>	<u>POLYOL, TDI</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>

7.06 continued below

☐ Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

¹For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
<u>1</u>	<u>PIGMENT</u>	<u>0.001</u>
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

²Use the following codes to designate how the concentration was determined:

A = Analytical result

E = Engineering judgement/calculation

³Use the following codes to designate how the concentration was measured:

V = Volume

W = Weight

☐ Mark (X) this box if you attach a continuation sheet.

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagram which describes the treatment process used for residuals identified in question 7.01.

CBI

☐ Process type N/A

☐ Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

a. b. c. d. e. f. g.

Stream ID Code	Type of Hazardous Waste ¹	Physical State of Residual ²	Known Compounds ³	Concentrations (% or ppm) ^{4, 5, 6}	Other Expected Compounds	Estimated Concentrations (% or ppm)
1111						

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

¹Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

²Use the following codes to designate the physical state of the residual:

GC = Gas (condensable at ambient temperature and pressure)
GU = Gas (uncondensable at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

³For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

<u>Additive Package Number</u>	<u>Components of Additive Package</u>	<u>Concentrations (% or ppm)</u>
<u>1</u>	<u>N/A</u>	
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

⁴Use the following codes to designate how the concentration was determined:

A = Analytical result

E = Engineering judgement/calculation

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

⁵Use the following codes to designate how the concentration was measured:

V = Volume

W = Weight

⁶Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

<u>Code</u>	<u>Method</u>	<u>Detection Limit</u> <u>(± ug/l)</u>
<u>1</u>	<u>N/A</u>	<u></u>
<u>2</u>	<u></u>	<u></u>
<u>3</u>	<u></u>	<u></u>
<u>4</u>	<u></u>	<u></u>
<u>5</u>	<u></u>	<u></u>
<u>6</u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

CBI

a.	b.	c.	d.	e.		f.	g.
Stream ID Code	Waste Description Code¹	Management Method Code²	Residual Quantities (kg/yr)	Management of Residual (%)		Costs for Off-Site Management (per kg)	Changes in Management Methods
				On-Site	Off-Site		

²Use the codes provided in Exhibit 8-2 to designate the management methods

58

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI
RESPONSE
☐

NOT REQUIRED
FOR TDI

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

☐

N/A

Incinerator	Air Pollution Control Device ¹	Types of Emissions Data Available
1		
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

¹Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)

E = Electrostatic precipitator

O = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 9 WORKER EXPOSURE

General Instructions:

Questions 9.03-9.25 apply only to those processes and workers involved in manufacturing or processing the listed substance. Do not include workers involved in residual waste treatment unless they are involved in this treatment process on a regular basis (i.e., exclude maintenance workers, construction workers, etc.).

☐ Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

☐

Data Element	Data are Maintained for:		Year in Which Data Collection Began	Number of Years Records Are Maintained
	Hourly Workers	Salaried Workers		
Date of hire	X	X	1976	5 yrs
Age at hire	X	X		
Work history of individual before employment at your facility	X	X		
Sex	X	X		
Race	X	X		
Job titles				
Start date for each job title	X	X		
End date for each job title	X	X	↓	↓
Work area industrial hygiene monitoring data	N/A	N/A	N/A	N/A
Personal employee monitoring data	N/A		1976	
Employee medical history	X			
Employee smoking history	N/A			
Accident history	X			
Retirement date	X			
Termination date	X			
Vital status of retirees	N/A			
Cause of death data	N/A		↓	

☐ Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

☐

a.	b.	c.	d.	e.
<u>Activity</u>	<u>Process Category</u>	<u>Yearly Quantity (kg)</u>	<u>Total Workers</u>	<u>Total Worker-Hours</u>
Manufacture of the listed substance	Enclosed	_____	_____	_____
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____
On-site use as reactant	Enclosed	_____	_____	_____
	Controlled Release	<u>160068</u>	<u>4</u>	<u>8000</u>
	Open	_____	_____	_____
On-site use as nonreactant	Enclosed	_____	_____	_____
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____
On-site preparation of products	Enclosed	_____	_____	_____
	Controlled Release	<u>160068</u>	<u>4</u>	<u>8000</u>
	Open	_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

☐

Labor Category

Descriptive Job Title

A

MAINTENANCE MECHANIC

B

PANEL OPERATOR

C

BUNHANDLER

D

E

F

G

H

I

J

☐ Mark (X) this box if you attach a continuation sheet.

9.04 In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

☒ Mark (X) this box if you attach a continuation sheet.

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

Work Area ID

Description of Work Areas and Worker Activities

1	<u>MAINTENANCE MECHANIC</u>
2	<u>MAINTENANCE MECHANIC</u>
3	<u></u>
4	<u></u>
5	<u></u>
6	<u></u>
7	<u></u>
8	<u></u>
9	<u></u>
10	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

☐ Process type REBOND CARPET PAD MANUFACTURING

Work area 1, 2, 3

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance ¹	Average Length of Exposure Per Day ²	Number of Days per Year Exposed
<u>MAINT.</u>	<u>5</u>	<u>Breathing</u>	<u>GU</u>	<u>A</u>	<u>250</u>
<u>PNL. OPR.</u>	<u>4</u>	<u>Breathing</u>	<u>GU</u>	<u>E</u>	<u>250</u>
<u>BUD HNDL.</u>	<u>2</u>	<u>Breathing</u>	<u>GU</u>	<u>E</u>	<u>250</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

¹Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)
 SO = Solid

SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

²Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
 B = Greater than 15 minutes, but not exceeding 1 hour
 C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours
 E = Greater than 4 hours, but not exceeding 8 hours
 F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

Work area 1,2,3

Labor Category	8-hour TWA Exposure Level (ppm, mg/m ³ , other-specify)	15-Minute Peak Exposure Level (ppm, mg/m ³ , other-specify)
<u>MAINT. MECH.</u>	<u>U.K.</u>	<u>U.K.</u>
<u>PNL. OPER.</u>	<u>U.K.</u>	<u>U.K.</u>
<u>BND. HNDL.</u>	<u>U.K.</u>	<u>U.K.</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

☐

UK

<u>Sample/Test</u>	<u>Work Area ID</u>	<u>Testing Frequency (per year)</u>	<u>Number of Samples (per test)</u>	<u>Who Samples¹</u>	<u>Analyzed In-House (Y/N)</u>	<u>Number of Years Records Maintained</u>
Personal breathing zone			N/A			
General work area (air)						
Wipe samples						
Adhesive patches						
Blood samples						
Urine samples						
Respiratory samples						
Allergy tests						
Other (specify)						
Other (specify)						
Other (specify)						

¹Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist

B = Insurance carrier

C = OSHA consultant

D = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

<input type="checkbox"/>	<u>Sample Type</u>	<u>Sampling and Analytical Methodology</u>
	N/A	

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

<input type="checkbox"/>	<u>Equipment Type</u> ¹	<u>Detection Limit</u> ²	<u>Manufacturer</u>	<u>Averaging Time (hr)</u>	<u>Model Number</u>
	N/A				

¹Use the following codes to designate personal air monitoring equipment types:

- A = Passive dosimeter
- B = Detector tube
- C = Charcoal filtration tube with pump
- D = Other (specify) _____

Use the following codes to designate ambient air monitoring equipment types:

- E = Stationary monitors located within work area
- F = Stationary monitors located within facility
- G = Stationary monitors located at plant boundary
- H = Mobile monitoring equipment (specify) _____
- I = Other (specify) _____

²Use the following codes to designate detection limit units:

- A = ppm
- B = Fibers/cubic centimeter (f/cc)
- C = Micrograms/cubic meter (μm^3)

☐ Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

☐

Test Description

Frequency

(weekly, monthly, yearly, etc.)

N/A

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type REBOUND CARPET PAD MANUFACTURING
 Work area 1,2,3

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1972</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Other (specify) _____	<u>N</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Vessel emission controls	<u>N</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Other (specify) _____				

☐ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type NONE

Work area

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

Work area 3

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>Y</u>
Face shields	<u>Y</u>
Coveralls	<u>Y</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>Y</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

- 9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

Work Area	Respirator Type	Average Usage ¹	Fit Tested (Y/N)	Type of Fit Test ²	Frequency of Fit Tests (per year)
<u>3</u>	<u>ORGANIC VAPOR</u>	<u>C</u>	<u>Y</u>	<u>QL</u>	<u>4</u>
<u>3</u>	<u>FRESH AIR SUPPLY</u>	<u>C</u>	<u>Y</u>	<u>QL</u>	<u>4</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

¹Use the following codes to designate average usage:

A = Daily
B = Weekly
C = Monthly
D = Once a year
E = Other (specify) _____

²Use the following codes to designate the type of fit test:

QL = Qualitative
QT = Quantitative

☐ Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

- 9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

☐

Process type REBOND CARPET PAD MANUFACTURING

Work area 3

Training in proper use of protective equipment and handling of material. Area is a restricted access area for properly trained personnel only

- 9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type REBOND CARPET PAD MANUFACTURING

Work area 2,3

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping			<u>X</u>	
Vacuuming	<u>N/A</u>			
Water flushing of floors	<u>N/A</u>			
Other (specify)				

☐ Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure *N/A* *not required for TDI.*

Yes 1

No 2

Emergency exposure

Yes 1

No 2

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

☒ Yes 1

No 2

If yes, where are copies of the plan maintained? *PLANT MANAGER/MAIN OFFICE*

Has this plan been coordinated with state or local government response organizations? Circle the appropriate response.

Yes 1

☒ No 2

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response. *NOT REQUIRED FOR TDI*

Plant safety specialist 1

Insurance carrier 2

OSHA consultant 3

Other (specify) _____ 4

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and, thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

- ☐ Industrial area 1
- Urban area 2
- Residential area 3
- Agricultural area 4
- Rural area 5
- Adjacent to a park or a recreational area 6
- Within 1 mile of a navigable waterway 7
- Within 1 mile of a school, university, hospital, or nursing home facility 8
- Within 1 mile of a non-navigable waterway 9
- Other (specify) _____ 10

☐ Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude 40 ° 30 ' N "

Longitude 74 ° 22 ' W "

UTM coordinates Zone _____, Northing _____, Easting _____

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information. *NOT REQUIRED FOR TDI*

Average annual precipitation inches/year

Predominant wind direction

NOT REQUIRED FOR TDI

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition of CBI Y, N, and NA.)

<input type="checkbox"/> On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Importing	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Processing	<u>N</u>	<u>N/A</u>	<u>N/A</u>
Otherwise used	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Product or residual storage	<u>N</u>	<u>N/A</u>	<u>N/A</u>
Disposal	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Transport	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

10.06 Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)

CBI

☐

Quantity discharged to the air -0- kg/yr ± ____ %

Quantity discharged in wastewaters N/A kg/yr ± ____ %

Quantity managed as other waste in on-site treatment, storage, or disposal units N/A kg/yr ± ____ %

Quantity managed as other waste in off-site treatment, storage, or disposal units N/A kg/yr ± ____ %

☐ Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

☐ Process type REBOND CARPET PAD MANUFACTURING

<u>Stream ID Code</u>	<u>Control Technology</u>	<u>Percent Efficiency</u>
	<u>NONE USED</u>	

☐ Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

- 10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emission sources (e.g., equipment leaks). Photocopy this question and complete it separately for each process type.

CBI

☐

Process type MANUFACTURING REBOND CARPET UNDERLAY

Point Source
ID Code

Description of Emission Point Source

7E

TDI FILTER

7O

FOAM & PREPOLYMER BLENDER (OPEN)

7Q

STEAM VENT

☐ Mark (X) this box if you attach a continuation sheet.

☐ Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics -- Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

Point Source ID Code	Physical State ¹	Average Emissions (kg/day)	Frequency ² (days/yr)	Duration ³ (min/day)	Average Emission Factor ⁴	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
7E	G	±.005	12	4	±.005	LESS THAN 1	12	2
70	G	U.K.	250	480	U.K.	U.K.	120,000	4
70a	G	U.K.	250	480	U.K.	U.K.	120,000	4

¹Use the following codes to designate physical state at the point of release:

G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

²Frequency of emission at any level of emission

³Duration of emission at any level of emission

⁴Average Emission Factor — Provide estimated (± 25 percent) emission factor (kg of emission per kg of production of listed substance)

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

☐

N/A

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m) ¹	Building Width(m) ²	Vent Type ³
7A	5	.05	20°C	1	5	100	✓

¹Height of attached or adjacent building

²Width of attached or adjacent building

³Use the following codes to designate vent type:

H = Horizontal

V = Vertical

☐ Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source.

CBI

☐

N/A

Point source ID code

Size Range (microns)

Mass Fraction (% ± % precision)

< 1

≥ 1 to < 10

≥ 10 to < 30

≥ 30 to < 50

≥ 50 to < 100

≥ 100 to < 500

≥ 500

Total = 100%

☐ Mark (X) this box if you attach a continuation sheet.

PART C FUGITIVE EMISSIONS

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type REBOUND CARPET PAD MANUFACTURING
 Percentage of time per year that the listed substance is exposed to this process type 100 %

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					Greater than 99%
	Less than 5%	5-10%	11-25%	26-75%	76-99%	
Pump seals ¹						
Packed	<u>N/A</u>					
Mechanical						
Double mechanical ²						
Compressor seals ¹	<u>N/A</u>					
Flanges		<u>3</u>				
Valves						
Gas ³						
Liquid		<u>3</u>				
Pressure relief devices ⁴ (Gas or vapor only)		<u>1</u>				
Sample connections						
Gas	<u>N/A</u>					
Liquid	<u>N/A</u>					
Open-ended lines ⁵ (e.g., purge, vent)						
Gas	<u>N/A</u>					
Liquid						

¹List the number of pump and compressor seals, rather than the number of pumps or compressors

10.13 continued on next page

☐ Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

²If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

³Conditions existing in the valve during normal operation

⁴Report all pressure relief devices in service, including those equipped with control devices

⁵Lines closed during normal operation that would be used during maintenance operations

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

☐

a. Number of Pressure Relief Devices	b. Percent Chemical in Vessel ¹	c. Control Device	d. Estimated Control Efficiency ²
<u>1</u>	<u>100%</u>	<u>Ruptured Disk</u>	<u>100%</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

¹Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

²The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

☐ Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type *N/A*

Equipment Type	Leak Detection Concentration (ppm or mg/m ³) Measured at _____ Inches from Source	Detection Device ¹	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Completed (days after initiated)
Pump seals					
Packed	_____	_____	_____	_____	_____
Mechanical	_____	_____	_____	_____	_____
Double mechanical	_____	_____	_____	_____	_____
Compressor seals	_____	_____	_____	_____	_____
Flanges	_____	_____	_____	_____	_____
Valves					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____
Pressure relief devices (gas or vapor only)	_____	_____	_____	_____	_____
Sample connections					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____
Open-ended lines					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____

¹Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer

FPM = Fixed point monitoring

0 = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

☐

Vessel Type ¹	Floating Roof ² Seals	Composition of Stored Materials ³	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Operating Volume (l)	Vessel Emission Controls ⁴	Design Flow Rate ⁵	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate ⁶
H	N/A	100	1556976	32	60	2.375	6.425	24224	N/A	N/A	5.1	N/A	N/A

¹Use the following codes to designate vessel type:

F = Fixed roof
 CIF = Contact internal floating roof
 NCIF = Noncontact internal floating roof
 EFR = External floating roof
 P = Pressure vessel (indicate pressure rating)
 H = Horizontal
 U = Underground

²Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
 MS2 = Shoe-mounted secondary
 MS2R = Rim-mounted, secondary
 LM1 = Liquid-mounted resilient filled seal, primary
 LM2 = Rim-mounted shield
 LMW = Weather shield
 VM1 = Vapor mounted resilient filled seal, primary
 VM2 = Rim-mounted secondary
 VMW = Weather shield

³Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

⁴Other than floating roofs

⁵Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

⁶Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
 S = Sampling

PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

N/A

<u>Release</u>	<u>Date Started</u>	<u>Time (am/pm)</u>	<u>Date Stopped</u>	<u>Time (am/pm)</u>
<u>1</u>	_____	_____	_____	_____
<u>2</u>	_____	_____	_____	_____
<u>3</u>	_____	_____	_____	_____
<u>4</u>	_____	_____	_____	_____
<u>5</u>	_____	_____	_____	_____
<u>6</u>	_____	_____	_____	_____

10.24 Specify the weather conditions at the time of each release.

NOT REQUIRED FOR TSI

<u>Release</u>	<u>Wind Speed (km/hr)</u>	<u>Wind Direction</u>	<u>Humidity (%)</u>	<u>Temperature (°C)</u>	<u>Precipitation (Y/N)</u>
<u>1</u>	_____	_____	_____	_____	_____
<u>2</u>	_____	_____	_____	_____	_____
<u>3</u>	_____	_____	_____	_____	_____
<u>4</u>	_____	_____	_____	_____	_____
<u>5</u>	_____	_____	_____	_____	_____
<u>6</u>	_____	_____	_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

[illegible]

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MATERIAL SAFETY DATA

OCEAN[®] Network
EMERGENCY PHONE 1-800-OLIN-911

SECTION I - IDENTIFICATION

MSDS FILE 563

CHEMICAL NAME & SYNONYMS Toluene Diisocyanate 80-20		
CHEMICAL FAMILY Isocyanate	FORMULA $C_9H_6N_2O_2$	PRODUCT TDI 80-20
DESCRIPTION Clear colorless to pale yellow liquid with sharp pungent odor		CAS NO. 26471-62-5

SECTION II - NORMAL HANDLING PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE Do not take internally. Do not get in eyes, on skin or clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor. Protect against physical damage. Store in a cool, dry, well-ventilated place, away from areas where a fire hazard may be acute. Outside or detached storage is preferred. Blanket storage tanks with inert gas (nitrogen) or dry air. Separate from oxidizing materials.	
PROTECTIVE EQUIPMENT	VENTILATION REQUIREMENTS
EYES Goggles	As required to keep airborne concentrations below TLV
GLOVES Rubber, NBR or PVA	
OTHER Coveralls, impervious footwear	

SECTION III - HAZARDOUS INGREDIENTS

BASIC MATERIAL	OSHA PEL	LD50	LC50	SIGNIFICANT EFFECTS
Toluene-2,4-diisocyanate	0.02 ppm ceiling	5.8 g/kg (rat)	10 ppm/4 hrs (mouse)	Skin, eye, mucous membrane irritation. Pulmonary irritant. Allergic sensitization to skin and respiratory tract. May cause asthma attacks.
Toluene-2,6-diisocyanate	None established	No data	11 ppm/4 hrs-mouse	Irritation

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT 270°F COC METHOD	OSHA CLASSIFICATION Not Regulated (Ignitable)	FLAMMABLE EXPLOSIVE LIMIT	LOWER 0.9%	UPPER 9.5%
EXTINGUISHING MEDIA water, carbon dioxide or dry chemical. Use water to keep the exposed containers cool.				
SPECIAL FIRE HAZARD & FIRE FIGHTING PROCEDURES Water spray should be used to cool fire exposed containers and/or to disperse unignited vapors. Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.				

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 0.005 ppm TWA, 0.02 ppm STEL - 2,4 TDI (ACGIH 1986-87)
SYMPTOMS OF OVER EXPOSURE May cause irritation to eyes, throat, lungs, stomach, skin. Allergic sensitization to skin and respiratory tract. May cause asthma attacks
EMERGENCY FIRST-AID PROCEDURES
IN Immediately flush thoroughly with water for 15 minutes. call a physician.
EYES Immediately flush thoroughly with water for 15 minutes. call a physician.
INGESTION Immediately drink water to dilute.

SECTION VI - TOXICOLOGY (PRODUCT)

ACUTE ORAL LD 50
5.8 g/kg (rats)
ACUTE DERMAL LD 50
> 2 g/kg (rabbits)
ACUTE INHALATION LC 50
10 ppm/4 hrs (mouse)

CARCINOGENICITY Oral Exposure-Positive NTP Bioassay
MUTAGENICITY Not known to be mutagenic
EYE IRRITATION Irritation and/or burns
PRIMARY SKIN IRRITATION
Irritation and/or burns

PRINCIPAL ROUTES OF ABSORPTION
Inhalation, dermal

EFFECTS OF ACUTE EXPOSURE May cause irritation to lungs, eyes, throat, stomach, skin. Allergic sensitization of skin and respiratory tract. Corneal injury may occur.

EFFECTS OF CHRONIC EXPOSURE Damage/allergic sensitization to lungs. Inhalation studies indicate not carcinogenic. Carcinogenic risk from industrial use is not significant.

SECTION VII - SPILL AND LEAKAGE PROCEDURES (CONTROL PROCEDURES)

ACTION FOR MATERIAL RELEASE OR SPILL

Wear NIOSH/MSHA approved positive pressure supplied air respirator. Follow OSHA regulations for respirator use (see 29 CFR 1910.134). Wear goggles, coveralls and impervious gloves and boots. Add dry non-combustible absorbent, sweep up material and place in an approved DOT container. Add an equal amount of neutralizing solution to the container (90-95% water, 5-10% ammonia). Clean remaining surfaces with neutralizing solution and add this to container. Isolate container in a well-ventilated place and do not seal for 24 hrs. Ammonia vapors may be generated until solution is neutralized. Wash all contaminated clothing before reuse. In the event of a large spill use the telephone number shown on the front of this sheet.

TRANSPORTATION EMERGENCY, CONTACT CHEMTREC 800-424-9300

WASTE DISPOSAL METHOD

Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate Federal, State and local regulatory agencies to ascertain proper disposal procedures.

SECTION VIII - SHIPPING DATA

D.O.T. Toluene diisocyanate Poison B UN 2078

SECTION IX - REACTIVITY DATA

STABLE ☒ UNSTABLE ☐ AT _____ C _____ F

HAZARDOUS
POLYMERIZATION

MAY OCCUR ☒
WILL NOT OCCUR ☐

CONDITIONS TO AVOID

Water or incompatible materials in a closed system, excess heat

INCOMPATIBILITY (MATERIAL TO AVOID)

Acids, bases and alcohols, surface active materials

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, nitrogen oxides, hydrogen cyanide

SECTION X - PHYSICAL DATA

MELTING POINT 53-56°F	VAPOR PRESSURE 0.1mmHg, 20°C	VOLATILES No data
BOILING POINT 484°F	SOLUBILITY IN WATER Insoluble	EVAPORATION RATE No data
SPECIFIC GRAVITY (H ₂ O=1) 1.22	PH No data	VAPOR DENSITY (AIR=1) 6.0

INFORMATION: FURNISHED TO

FURNISHED BY DATE JUNE 19, 1987

Department of Environmental Hygiene and Toxicology
(203) 789-5436

Olin CORPORATION

120 Long Ridge Road, Stamford, Connecticut 06904

OCEAN® Network

EMERGENCY PHONE 1-800-OLIN-911

Material Safety Data Sheet

Required under USDL Safety and Health Regulations
for Shipyard Employment (29 CFR 1915)

U.S. Department of Labor

Occupational Safety and Health Administration



OMB No 1218-0074
Expiration Date 05/31/86

Section I

Emergency Telephone Number

Manufacturer's Name

Crest-Foam Corp.

(201) 641-9030

Address (Number Street City, State and ZIP Code)

100 Carol Place

Chemical Name
and Synonyms

Modified toluene-diisocyanate

Trade Name
and Synonyms

Crestpol

Moonachie, N. J. 07074

Chemical
Family

isocyanate

Formula

NA

Section II - Hazardous Ingredients

Hazardous Mixtures of Other Liquids, Solids or Gases

% TLV (Units)

toluene-diisocyanate (TDI)

<20 0.02 PPM

TDI partially reacted with polyol

>80 0.02 PPM

Section III - Physical Data

Boiling Point (°F)

Specific Gravity (H₂O=1)

25°C

1.075

Vapor Pressure (mm Hg) for TDI

0.025 at 25°C

Percent Volatile by Volume (%)

Vapor Density (AIR=1)

TDI 6.0

Evaporation Rate

=1)

Solubility in Water

reacts with water

Appearance and Odor

viscous colorless liquid, sharp pungent odor

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)

267°F ASTM D-56 tag closed cup

Flammable Limits

LeI

N.E.

Uel

N.E.

Extinguishing Media

Water fog, CO₂, dry chemical

Special Fire Fighting Procedures

In fighting TDI fires, protect against TDI and nitrogen dioxide vapors, wear self-

contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards

Avoid water contamination in closed containers or confined spaces, CO₂ evolved.

Section V - Health Hazard Data

LD50 ORAL (INGESTION)

>5g/kg

LD50 DERMAL (SKIN CONTACT)

>2g/kg

INHALATION (LC50)

N.E.

FISH LC50 (LETHAL CONCENTRATION)

N.E.

TLV (UNITS) (THRESHOLD LIMIT VALUE) 0.02 ppm
(0.14 mg/m³) TWA/ceiling

SKIN IRRITATION Irritant can cause
redness, swelling & blistering
under prolonged contact.

EFFECTS TO EYE Causes immediate
irritation upon contact

EFFECTS TO LUNG Irritation to
mucous membrane of upper and
lower respiratory tract

OTHER Potential allergic sensi-
tizer from skin contact or
inhalation.

N.E. NOT ESTABLISHED N.A. NOT APPLICABLE

Section V - Health Hazard Data

EMERGENCY AND FIRST AID PROCEDURES. EFFECTS OF OVER EXPOSURE.

Overexposure: Exposures cause irritation of respiratory tract (dry throat, cough, shortness of breath, chest tightness) resulting in sinusitis, bronchitis and asthma-like symptoms. Cause sensitization in some individuals resulting in asthma-like symptoms on subsequent exposures below TLV. **First Aid:** Eyes-Promptly flush eyes with water for 15 min. and get medical attention; Skin-Wash with water and tincture of green soap. For severe exposure, get under safety shower, remove clothing, get medical attention; Inhalation-Remove to uncontaminated area, administer oxygen if needed; Ingestion-Drink large amounts of water to reduce corrosivity and get medical help.

Section VI - Reactivity Data

Stability	Unstable	Conditions to Avoid
		Avoid contact with moisture and other materials
	Stable	
	X	which react with isocyanates.

Incompatibility (Materials to Avoid)

Water, alcohols, strong bases, carboxylic acids, metal compounds

Hazardous Decomposition Products

Oxides of nitrogen, carbon monoxide, traces of hydrogen cyanide

Hazardous Polymerization	May Occur	Conditions to Avoid
	X	Avoid heating over 200°F
	Will Not Occur	

Section VII - Spill or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Cover the spill with saw-dust, vermiculite, Fuller's earth or other absorbent materials; pour liquid decontaminant over spillage; Allow to react at least 10 min. Collect material in open containers; Add further amounts of decontamination solution. Remove containers to safe place; Cover loosely. Wash down area with liquid decontaminant. Decontamination solutions: Solution of surfactant (Tergitol-20% & Water-80% or solution of ammonium hydroxide-4-8%, water-90-94% & detergent-2%).

WASTE DISPOSAL METHOD

Waste material can be incinerated or disposed of in accordance with RCRA. TDI is listed as a hazardous waste (No. U-223) under Section 261.33 (f) of RCRA. Keep waste polyol and waste isocyanate separated. Do not dispose of in sewer system.

Section VIII - Special Protection Information

RESPIRATOR TYPE	
Use respirator that is approved or recommended for use in isocyanate containing environments (air purifying or fresh air supplied). Consider the type of application, the environment and airborne concentrations to ensure proper selection of appropriate respirator.	
EYE PROTECTION	GLOVES
Goggles or full face shield	Plastic or rubber safety gloves
OTHER PROTECTIVE EQUIPMENT Local exhaust ventilation is required to maintain air concentrations below TLV. If material is spray-applied, ventilation should be provided and a respirator worn. Safety showers and eye-wash stations should be available. Educate and train employees in safe use of product.	

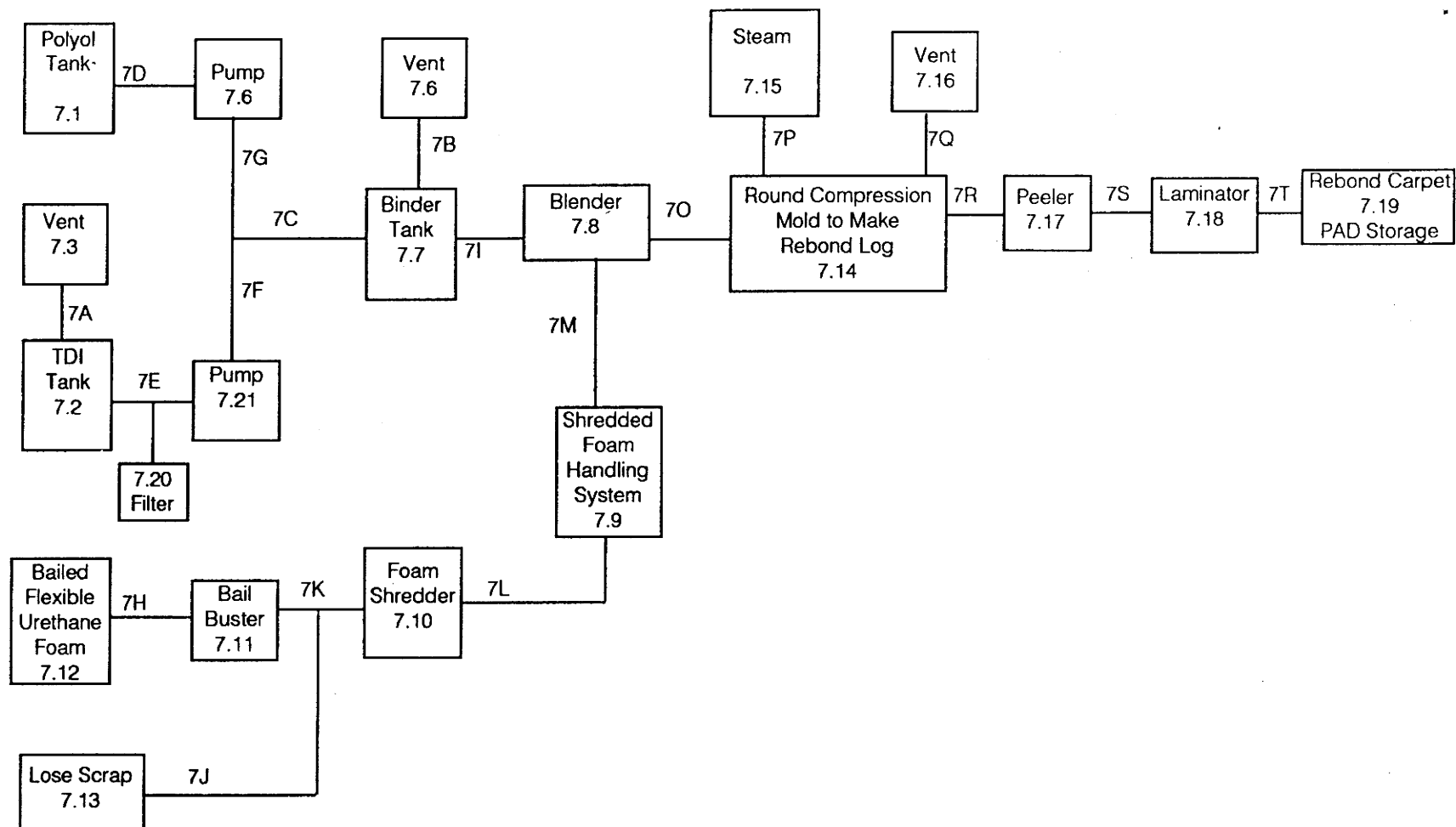
Section IX - Special Precautions

STORAGE TEMPERATURE (OPTIMUM)		AVERAGE SHELF LIFE
Min. 77°F (25°C)	Max. 86°F (30°C)	3 months
SPECIAL SENSITIVITY (HEAT, LIGHT, MOISTURE)		
Storage in tightly closed containers to protect from moisture.		
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING		
This product reacts with water and other substances to provide carbon dioxide gas which can cause sealed containers to expand, and possibly rupture. Containers should not be resealed if contamination is suspected.		

7.01 PROCESSOR

Process Type: Rebond Carpet PAD Manufacturing Process

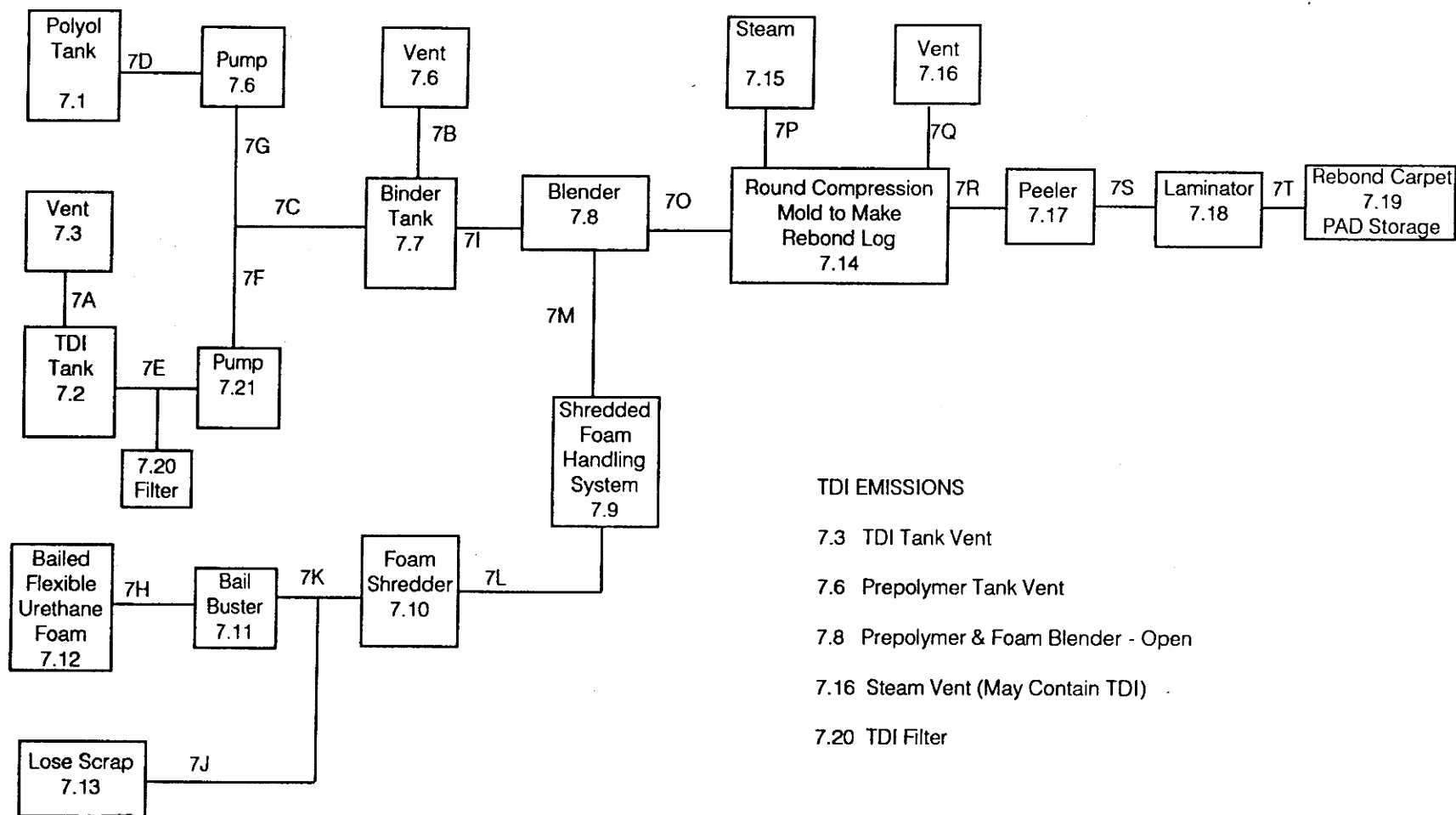
Intermediates: Prepolymer Containing TDI Used to Glue Scrap Foam into Rebond Log



7.03 EMISSIONS

Process Type: Rebond Foam Carpet PAD Manufacturing Process

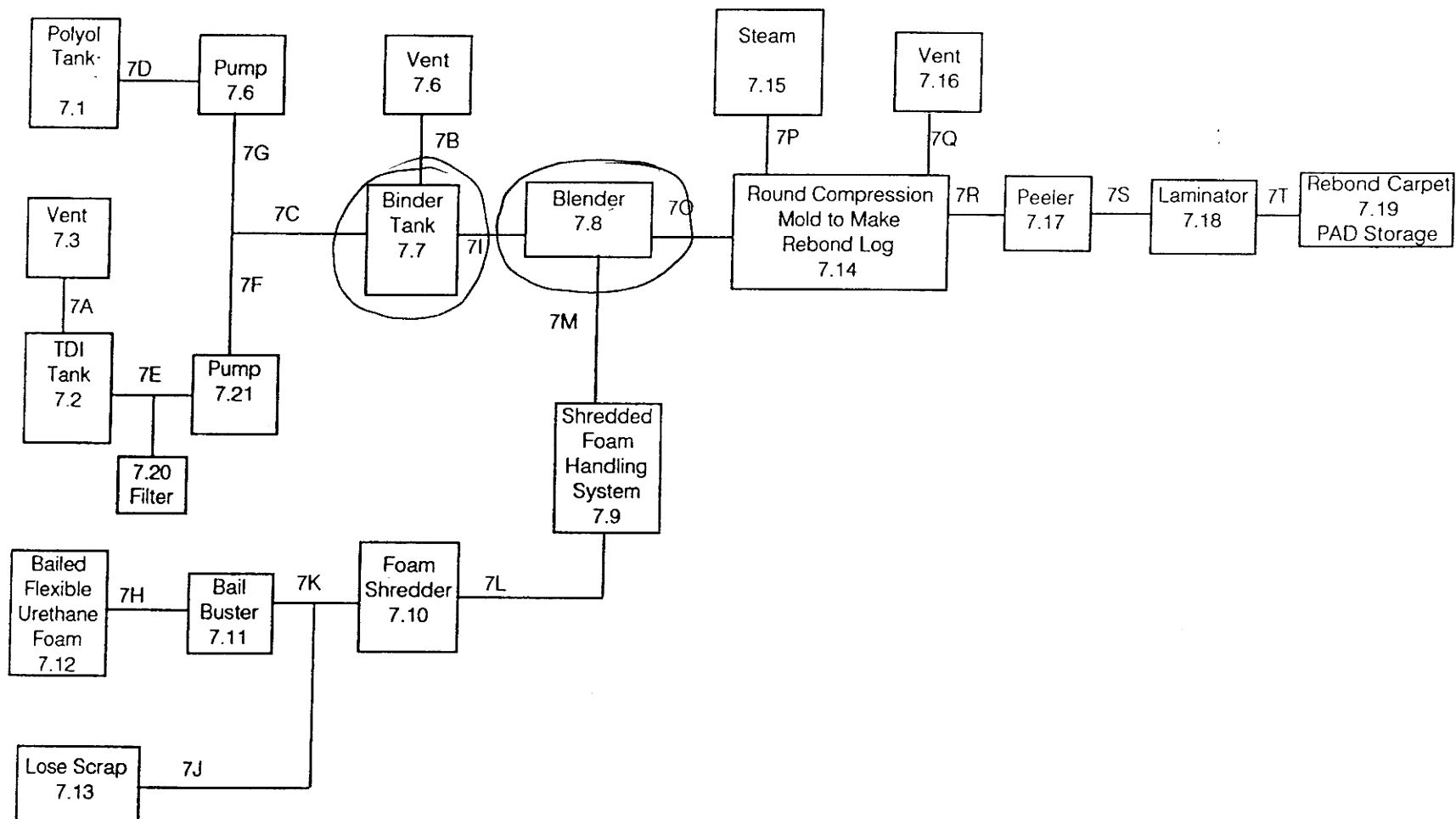
Intermediates: Prepolymer Containing TDI Used to Glue Scrap Foam into Rebond Log



7.01 PROCESSOR

Process Type: Rebond Carpet PAD Manufacturing Process

Intermediates: Prepolymer Containing TDI Used to Glue Scrap Foam into Rebond Log



APPENDIX II: Substantiation Form and Instructions
to Accompany Claims of Confidentiality Under the
Comprehensive Assessment Information Rule (CAIR)

If you assert one or more claims of confidentiality for information submitted on a Comprehensive Assessment Information Rule (CAIR) form, please answer, pursuant to 40 CFR 740.219, all the following questions in the space provided. Type all responses. If you need more space to answer a particular question, please use additional sheets. If you use additional sheets, be sure to include the section, number, and (if applicable) subpart of the question being answered, and write your facility's name and Dun & Bradstreet Number in the lower right-hand corner of each sheet. A completed copy of this form must accompany all submissions containing one or more claims of confidentiality. Failure to do so will result in the waiver of your claim of confidentiality.

EPA has identified six information categories as those which encompass all claims of confidentiality. These are: Submitter identity (h); Substance identity (i); Volume manufactured, imported, or processed (j); Use information (k); Process information (l); and Other information (m). Respondents who assert a CBI claim on the reporting form must mark the letter(s) (h through m) that represent(s) the appropriate category(ies) of confidentiality in the box adjacent to the question, and answer the questions in this form.

Respondents who assert a CBI claim for information submitted under CAIR must also provide EPA with sanitized and unsanitized versions of their submissions. The unsanitized version must be complete and contain all information being claimed as confidential. The sanitized copy must contain only information not claimed as confidential. EPA will place the second copy of the submission in the public file. Failure to submit the second copy of the form at the time the respondent submits the reporting form containing confidential information or after receipt of a notice from EPA thereafter will result in a waiver of the respondent's claim of confidentiality.

Please indicate the CAS Registry Number (if known) or chemical name (if the CAS Registry Number is not known) for the substance that is the subject of this form:

If you are reporting on a tradename, please provide the tradename for the substance that is the subject of this form:

Does this form contain CBI? [] Yes [] No

If the answer to this question is yes, you must bracket the text claimed as CBI. Any unbracketed information may be placed in the public file.

☐ Mark (X) this box if you attach a continuation sheet.

A. All Claims. Respondents who assert any CBI claims must answer the following questions in addition to the appropriate questions from sections B through G, below:

(1) For what period do you assert a claim of confidentiality? If a claim is to extend until a certain event or point in time, please indicate that event or time period. If the period indicated is longer than 2 calendar years, explain why. If different periods of protection are required for different categories of information, please so indicate.

(2) Has the information that you are claiming as confidential been or will it be disclosed to individuals outside your company?

☐ Yes ☐ No

If so, what, if any, restrictions apply to the use or further disclosure of the information?

(3) Briefly describe the physical and procedural restrictions, if any, within your company on the use and storage of the information you are claiming as confidential. What other steps have you taken to prevent the undesired disclosure of the information by others?

(4) Does the information you are claiming as confidential appear or is it referred to in advertising, promotional, or safety materials for the substance or an end-product containing the substance?

☐ Yes ☐ No

Does it appear or is it referred to in professional or trade publications?

☐ Yes ☐ No

If so, indicate why the information should nonetheless be considered confidential.

☐ Mark (X) this box if you attach a continuation sheet.

(5) If the information you wish to claim as confidential were to be disclosed to the public by EPA, how much difficulty would a new competitor have in entering the market for this substance, considering such constraints as capital and marketing costs, specialized marketing expertise, or unusual production processes?

(6) Has EPA, another Federal agency, or a Federal Court made any pertinent confidentiality determinations for information regarding this substance?

☐ Yes ☐ No

If so, please identify the entity and provide EPA with copies of such determinations.

B. Submitter Identity (code h). Respondents who assert CBI claims for submitter identity must also answer the following questions:

(1) Approximately how many competitors do you have in the market for this substance or the final product containing this substance?

(2) What harm, if any, would result from EPA's disclosure of the submitter identity? Provide detailed descriptions of both the probable harm from disclosure and the causal relationship between disclosure and harm.

(3) If you have also asserted a claim of confidentiality for substance identity, what harm to your company's competitive position would result from disclosure of your company's identity if the substance identity were to remain confidential?

☐ Mark (X) this box if you attach a continuation sheet.

C. Substance Identity (code i). Specific substance identity can be claimed as confidential only if that substance identity is confidential for purposes of the TSCA Chemical Substance Inventory. Respondents who assert CBI claims for substance identity must also answer the following questions:

- (1) (a) Has the substance been patented or disclosed in a patent in the U.S. or elsewhere?

☐ Yes ☐ No

If so, indicate the relevant patent(s) and the reasons why the substance identity should nonetheless be considered confidential.

Patent Number: _____

- (b) Exactly what information which does not appear in the patent would be disclosed to competitors by releasing the specific substance identity? Explain in detail how competitors could use this information.

- (c) Since the patent provides protection for the substance, why are you asserting confidentiality?

- (2) (a) In what form (i.e., product, effluent, emission, etc.) does this substance leave your site?

- (b) What measures have you taken to guard against the discovery of the substance identity by others?

☐ Mark (X) this box if you attach a continuation sheet.

(c) If the substance is formulated with other chemicals, list them, and state the concentration of the claimed substance in the mixture.

(3) (a) If the substance leaves the site in a product that is available to the public or your competitors, can the substance be identified by analysis of the product?

☐ Yes ☐ No

(b) Is it likely that a competitor has attempted or will attempt to chemically analyze the substance?

☐ Yes ☐ No

(c) Would the cost and difficulty of such analysis be great or small? Why?

(4) What harm, if any, would result from EPA's public disclosure of the specific chemical identity? Provide detailed descriptions of both the probable harm to your company from disclosure and the causal relationship between release and harm.

(5) Would public disclosure of the specific chemical identity reveal to your competitors the use of the substance or the process by which this substance is manufactured?

☐ Mark (X) this box if you attach a continuation sheet.

D. Volume Manufactured, Imported, or Processed (code j). Respondents who assert CBI claims for volume manufactured, imported, or processed must also answer the following questions:

(1) If you have also claimed submitter's name as confidential and EPA keeps confidential the link between your company identity and the volume manufactured, imported, or processed, your identity will not be associated in any way with that volume. In this case, what harm to your company's competitive position would result from disclosing that volume? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(2) If you have also claimed substance identity as confidential and EPA keeps confidential the link between the substance identity and the volume manufactured, imported, or processed, the substance identity will not be associated in any way with that volume. In this case, what harm to your company's competitive position would result from disclosing that volume? How could a competitor use that information? What is the causal relationship between the disclosure and the harm?

(3) If you have claimed neither submitter nor substance identity as confidential, what harm, if any, would result from release of your volume manufactured, imported, or processed? Provide a detailed description of both the harm and the causal relationship between disclosure and harm.

E. Use Information (code k). Respondents who assert CBI claims for use information must also answer the following questions:

(1) If you have also claimed submitter identity as confidential and EPA keeps confidential the link between your company identity and the use data, your identity will not be associated in any way with the use data. In this case, what harm to your competitive position would result from disclosing the use data? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

☐ Mark (X) this box if you attach a continuation sheet.

(2) If you have also claimed substance identity as confidential and EPA keeps confidential the link between the substance identity and the use data, the substance identity will not be associated in any way with the use data. In this case, what harm to your company's competitive position would result from disclosing the use data? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(3) If you have claimed neither submitter nor substance identity as confidential, what harm, if any, would result from release of your use information? Provide a detailed description of both the harm and the causal relationship between disclosure and harm.

F. Process information (code 1). Respondents who assert CBI claims for process information must also answer the following questions:

(1) If you have also claimed submitter identity as confidential and EPA keeps confidential the link between your company identity and process information, your identity will not be associated in any way with this information. In this case, what harm to your competitive position would result from disclosing the process information? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(2) If you have also claimed substance identity as confidential and EPA keeps confidential the link between the substance identity and the process information, the substance identity will not be associated in any way with the process information. In this case, what harm to your company's competitive position would result from disclosing the process information? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

☐ Mark (X) this box if you attach a continuation sheet.

(3) If you claimed neither submitter nor substance identity as confidential, what harm, if any, would result from release of your process information? Provide a detailed description of both the harm and the causal relationship between the disclosure and the harm.

G. Other information (code m). Respondents who assert CBI claims using the "other information" category, must also answer the following questions:

(1) Is the item confidential in and of itself, or is it confidential because it will reveal some other confidential information, whether or not that other information is reported on this form? If the latter, what is the information that will be revealed, and how would disclosure of the item in turn lead to disclosure of the other information?

(2) Describe with specificity the harm to your company's competitive position which would result from disclosing the information.

(3) If you have also claimed submitter identity as confidential and EPA keeps confidential the link between your company identity and this information, your identity will not be associated in any way with the item claimed. In this case, what harm to your competitive position would result from disclosing the item? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(4) If you have also claimed substance identity as confidential and EPA keeps confidential the link between the substance identity and the item, the substance identity (other than category name) will not be associated in any way with the item claimed. In this case, what harm to your company's competitive position would result from disclosing the item? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

☐ Mark (X) this box if you attach a continuation sheet.

I certify that I have personally examined and am familiar with the information submitted in this CBI Substantiation Form and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

NAME

SIGNATURE

DATE SIGNED

TITLE

(_____) -

TELEPHONE NO.

☐ Mark (X) this box if you attach a continuation sheet.